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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,274

04/07/2005

James John Schmitt

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EXAMINER

MCGUTHRY BANKS, TIMA MICHELE

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,274	Applicant(s) SCHMITT ET AL.	
	Examiner TIMA M. MCGUTHRY-BANKS	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

Claims 1 and 11 are currently amended, Claims 2-5, 7 and 10 are as previously presented, Claim 6 is as originally filed, and Claims 8 and 9 are withdrawn.

Election/Restrictions

This application contains claims 8 and 9 drawn to an invention nonelected with traverse in the reply filed on 1/18/2007. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Simpson (US 1,729,496).

Applicant's admitted prior art teaches agglomerating mineral ore, for example iron ore (page 1). After the pellets are formed, they are exported to a kiln and heated in stages to 1200-1350 °C (page 2). The initial heating occurs at 900-1200 °C (page 3). However, the admitted prior art does not teach an inorganic binder and/or an organic binder and a binder additive selected from boron oxide, calcium borate, sodium borate, boron nitride, and mixtures thereof.

Simpson teaches making briquettes of iron ore. The binder comprises 2 1/2% diatomaceous earth and 1 1/2% lye, which reads on an inorganic binder, and 1% borax. Regarding Claim 2, borax is sodium tetraborate. Regarding Claim 3, borax is a type of sodium borate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the binder taught by Simpson, since Simpson teaches that the briquettes stood up to the fusing point and operated efficiently at high furnace temperatures. Additionally, fusion can take place at lower temperatures and the amount of coke required is decreased (page 5, lines 3-12).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's prior art in view of Simpson as applied to claim 1 above, and further in view of JP 02250929 A.

Applicant's prior art in view of Simpson discloses the invention substantially as claimed. However, Applicant's prior art in view of Simpson does not disclose that the binder additive is derived from ulexite, colemanite, Gerstley, Laguna Murray's Gillespie or mixtures thereof as claimed. JP '929 teaches a pellet comprised of iron and nickel ore, coke, lime and one kind among sodium borate, calcium borate, colemanite, etc (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute colemanite in the product of applicant's prior art in view of Simpson, since JP '929 teaches the equivalence of these boron-containing compounds for pelletizing iron ore for further reduction.

Claims 1-7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banyai et al (US 4,919,711) in view of applicant's admitted prior art.

Banyai et al is applied as discussed in the office action mailed 9/17/08. The pellets are fired at a final temperature of 2400 °F, or 1315 °C. However, Banyai et al does not teach a

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preheat stage of 900 °C to 1200 °C. Applicant's admitted prior art teaches agglomerating mineral ore, for example iron ore (page 1). After the pellets are formed, they are exported to a kiln and heated in stages to 1200-1350 °C (page 2). The initial heating occurs at 900-1200 °C (page 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to preheat at the temperature in Banyai et al as taught by applicant's admitted prior art, since the admitted prior art teaches that preheating increases the pellets' hardness before they are transported to the kiln and/or final firing stage (page 3).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banyai et al in view of applicant's admitted prior art as applied to Claim 1 above, and further in view of JP '929.

Banyai et al in view of applicant's admitted prior art discloses the invention substantially as claimed. However, Banyai et al in view of applicant's admitted prior art does not disclose that the binder additive is derived from ulexite, colemanite, Gerstley, Laguna Murray's Gillespie or mixtures thereof as claimed. JP '929 teaches a pellet comprised of iron and nickel ore, coke, lime and one kind among sodium borate, calcium borate, colemanite, etc (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute colemanite in the product of Banyai et al in view of applicant's admitted prior art, since JP '929 teaches the equivalence of these boron-containing compounds for pelletizing iron ore for further reduction.

Response to Arguments

Applicant's arguments with respect to Schmitt in view of Franklin et al have been fully considered and are persuasive. The rejection of the claims has been withdrawn.

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With respect to Banyai et al, the examiner agrees that Banyai et al does not teach the inclusion of sodium tetraborate is a preferred embodiment. However, what Banyai et al does teach is that a binder containing sodium tetraborate is known in the art. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Additionally, nonpreferred and alternative embodiments constitute prior art; disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. See MPEP § 2123.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMA M. MCGUTHRY-BANKS whose telephone number is (571)272-2744. The examiner can normally be reached on M-F 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit
1793

/T. M. M./
Examiner, Art Unit 1793
16 December 2008